Response to Amendment

This Office Action is in response to a communication made on June 17, 2009.

The Information Disclosure Statements received May 12, 2009, July 31, 2009,

and October 6, 2009 have been considered.

Claims 2-3, 7, 12, 14, 18-19, 28, 29, 42, 43, and 45-47 have been cancelled.

Claims 1, 8-9, 13, 17, 25, 31, 34, 38-39, and 44 are currently amended.

Claims 1, 4-6, 8-11, 13, 15-17, 20-27, 30-41, and 44 are currently pending.

(Please note the different in the status of claims from this listing and the listing provided

on pg 14 of the remarks).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4-17, and 20-47 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Graupner (7035930) in view of Abu El Atu (6311144).

Regarding claims 1 and 25, Graupner teaches a method comprising:

using a system definition model design the system (Col. 5, lines 7 – 16), wherein

the system is an application (Col. 3, lines 4 – 11);

subsequently using the system definition model in a deployment phase of the system to deploy the system on one or more computing devices (Col. 4, lines 26 – 29; Col. 8, lines 4 - 17); and

after deployment of the system, using the system definition model in a management phase of the system to manage the system deployed on the one or more computing devices (Col. 8, lines 4 – 17);

using another system definition model to design an environment, wherein the system is deployed to the environment on the one or more computing devices (Col. 3, lines 20 – 26);

subsequently using the other system definition model to deploy the environment one the one or more computing devices (Col. 4, lines 26 – 29; Col. 8, lines 4 - 17); and

after deployment of the environment, using the other system definition model to manage the environment deployed on the one or more computing devices (Col. 4, lines 26 – 29; Col. 8, lines 4 – 17);

wherein the system definition model includes constraints that must be satisfied by the environment in order for the system to be run on the one or more computing devices and wherein the system definition model includes constraints that must be satisfied by the system in order for the system to be run on one or more computing devices (Col. 5, lines 17-36).

Graupner does not explicitly indicate the creating of the system definition model as the system is being designed.

Abu El Ata teaches a modeling system that includes modeling and simulating

systems that are being designed and proposed, and prior to any deployment of the

actual application and system (Col. 3, lines 39-45).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made that Graupner's system of optimization of a distributed application

can also be applied to distributed application still in the design and proposition phase of

development.

Regarding claim 17, Graupner teaches One or more computer readable storage

media having stored thereon a plurality of instructions that when executed by a

processor, cause the processor to:

using a system definition model design the system (Col. 5, lines 7 – 16), wherein

the system is an application (Col. 3, lines 4 – 11); the system definition model includes a

representation of an environment in which the application is to be deployed, and the

using includes binding the application to the representation in the system definition

model (Col. 4, lines 26 – 29; Col. 8, lines 4 – 17);

subsequently using the system definition model in a deployment phase of the

system to deploy the system on one or more computing devices (Col. 4, lines 26 – 29;

Col. 8, lines 4 - 17); and

after deployment of the system, using the system definition model in a

management phase of the system to manage the system deployed on the one or more

computing devices (Col. 8, lines 4 – 17).

Graupner does not explicitly indicate the creating of the system definition model as the system is being designed.

Abu El Ata teaches a modeling system that includes modeling and simulating systems that are being designed and proposed, and prior to any deployment of the actual application and system (Col. 3, lines 39-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made that Graupner's system of optimization of a distributed application can also be applied to distributed application still in the design and proposition phase of development.

Regarding claim 31, Graupner teaches a system comprising:

a processor; and a plurality of executable instructions which, when executed by the processor, perform operations comprising:

using a system definition model in a development phase of a system to design the system, the system being applicable across a lifecycle of the application, wherein the lifecycle of the application includes deployment of the application and management of the application (Col. 4, lines 26 – 29; Col. 8, lines 4 - 17) the system definition model includes a representation of an environment in which the application is to be deployed, and the using includes binding the application to the representation in the system definition model (Col. 4, lines 26 – 29; Col. 8, lines 4 – 17);

subsequently using the system definition model to deploy the system on one or more computing devices (Col. 4, lines 26 – 29; Col. 8, lines 4 - 17); and

after deployment of the system, using the system definition to manage the

system deployed on the one or more computing devices (Col. 4, lines 26 – 29; Col. 8,

lines 4 - 17); and

wherein the system further includes a schema to dictate how functional

operations within the system definition model are to be specified (Col. 7, lines 54 - 59).

Graupner does not explicitly indicate the creating of the system definition model

as the system is being designed.

Abu El Ata teaches a modeling system that includes modeling and simulating

systems that are being designed and proposed, and prior to any deployment of the

actual application and system (Col. 3, lines 39-45).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made that Graupner's system of optimization of a distributed application

can also be applied to distributed application still in the design and proposition phase of

development.

Regarding claim 4, Graupner teaches a method as recited in claim 1; using

knowledge obtained during management of the system to design a subsequent version

of the system (Col. 8, lines 4 – 17).

Regarding claims 5, 20, 26, and 32, Graupner teaches a method as recited in

claims 1, 17, 25, and 31, wherein the system definition model includes knowledge

describing how to deploy the system on the one or more computing devices (Col. 4,

lines 26 – 29; Col. 8, lines 4 - 17).

Regarding claims 6, 21, 27, 33, and 44, Graupner teaches a method as recited in claims 1, 17, 25, and 31, wherein the system definition model includes knowledge describing how to deploy the system on multiple different computing devices, and wherein the knowledge includes different knowledge describing how to deploy the system on each of the multiple different computing devices (Col. 4, lines 26 – 29; Col. 8, lines 4 – 17; Col. 5, lines 17-36).

Regarding claims 22, 34, and 45, Graupner teaches a method as recited in claims 17, 31, and 42, wherein the system definition model includes constraints that must be satisfied by the one or more computing devices in order for the system to be run on the one or more computing devices (Col. 5, lines 17-36).

Regarding claims 8, 23, 36, and 46, Graupner teaches a method as recited in claims 7, 22, 34, and 48, wherein the system definition model can be used to check whether the constraints are satisfied by the one or more computing devices during design of the system (Col. 5, lines 17-36).

Regarding claim 9 and 35, Graupner teaches a method as recited in claims 7 and 34; wherein the system definition model can be used to check whether the constraints are satisfied by the one or more computing devices during design of the system and during management of the system (Col. 5, lines 17-36).

Regarding claims 10, 24, 30, 37, and 47, Graupner teaches a method as recited in claims 1, 17, 25, 31, and 42, wherein the system definition model includes knowledge describing how to manage the system after deployment of the system (Col. 4, lines 26 – 29; Col. 8, lines 4 - 17).

Regarding claim 11, Graupner teaches a method as recited in claim 1, further comprising: during management of the system, using a flow to automatically propagate a configuration change to the system (Col. 8, lines 4 - 17).

Regarding claim 13, Graupner teaches a method as recited in claim 12, wherein the system definition model for the environment is derived through examination of the configuration of one or more computing devices (Col. 5, lines 53 – 67).

Regarding claim 15, Graupner teaches a method as recited in claim 1, wherein a plurality of environments are deployed on the one or more computing devices, the method further comprising: using a plurality of different system definition models to design each of the plurality of environments, wherein each of the plurality of environments is associated with one of the plurality of different system definition models; using, for each environment, the associated one of the plurality of different system definition models to deploy the environment; and after deployment, using, for each environment, the associated one of the plurality of different system definition models to manage the environment (Col. 5, lines 17 – 26).

Regarding claim 16, Graupner teaches a method as recited in claim 15, wherein each of the plurality of environments is layered, and wherein each of the plurality of environments serves as environment to one other of the plurality of environments or to the system (Col. 4, lines 7 – 17).

Regarding claim 38, Graupner teaches a system as recited in claim 31, wherein the system further comprises: another system definition model applicable across a lifecycle of an environment, wherein the lifecycle of the environment includes

deployment of the environment, and management of the environment (Col. 4, lines 26 –

29; Col. 8, lines 4 - 17); and wherein the schema is further to dictate how functional

operations within the other system definition model are to be specified (Col. 7, lines 54 -

59).

Graupner does not explicitly indicate the creating of the system definition model

as the system is being designed.

Abu El Ata teaches a modeling system that includes modeling and simulating

systems that are being designed and proposed, and prior to any deployment of the

actual application and system (Col. 3, lines 39-45).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made that Graupner's system of optimization of a distributed application

can also be applied to distributed application still in the design and proposition phase of

development.

Regarding claim 39, Graupner teaches a system as recited in claim 38, wherein

the system definition model for the environment is derived through examination of the

configuration of one or more computing devices (Col. 5, lines 53 – 67).

Regarding claim 40, Graupner teaches a system as recited in claim 38, wherein

the system definition model includes constraints that must be satisfied by the

environment in order for the application to be run on the environment, and wherein the

other system definition model includes other constraints that must be satisfied by the

application in order for the application to be run on the environment (Col. 5, lines 17-36).

Regarding claim 41, Graupner teaches a system as recited in claim 38, wherein the system further comprises: an additional system definition model applicable across a lifecycle of an additional environment, wherein the lifecycle of the additional environment includes design of the additional environment, deployment of the additional environment, and management of the additional environment; wherein the additional environment is layered below the environment; and wherein the schema is further to dictate how functional operations within the additional system definition model are to be specified (Col. 8, lines 4 – 17, where the entire model can be updated based on optimization including hardware clusters).

Response to Arguments

Applicant's arguments filed June 17, 2009 have been fully considered but they are not persuasive.

The applicant argues that the combination of Graupner and Abu El Ata does not teach constraints that must be satisfied by the environment or system to allow the system to run on the computing devices. The examiner disagrees; Graupner teaches that the physical model of the system includes information such as attributes for processing, storage, and transportation (Col. 6, lines 34 - 65). Graupner further teaches that capacity and demand attributes are calculated for the distributed application (Col. 5, lines 7 - 16). Graupner's system for teaches that those attributes are used in determining the constraints between correlating the models of the physical environment and distributed application (Col. 7, lines 26 – 34; Col. 5, lines 17 – 37).

The applicant argues that combination of Graupner and Abu El Ata does not teach a representation of an environment in which the application is to be deployed, and the using includes binding the application to the representation in the system definition model. The examiner disagrees, Graupner teaches that the environment is part of the modeling operation of the system and that there is a mapping between the environment and the distributed application (Col. 5, lines 38 – 66; Col. 6, lines 34 – 51; Col. 5, lines 27 – 37; Col. 7, lines 42 – 59).

The applicant argues that the combination of Graupner and Abu El Ata does not teach validating constraints. The examiner disagrees, Graupner's system ensures that the constraints of both the physical model and the distributed application model are met in an optimal fashion when designing the mapping of the system environment (Col. 7, lines 26 – 41; Col. 9, lines 47 - 67).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KEVIN BATES whose telephone number is (571)272-

3980. The examiner can normally be reached on M-F 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax

phone number for the organization where this application or proceeding is assigned is

571-273-8300.

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEVIN BATES/
Primary Examiner, Art Unit 2456